

a solderable metal layer completely surrounding said core; and

a solder layer completely surrounding said metal layer.

9. (Twice Amended) A modified substrate comprising:

a substrate;

a metalized pad on said substrate; and

a bump feature on said metalized pad, said bump feature comprising a substantially non-deformable dielectric core; a solderable metal layer completely surrounding said core; and a solder region completely surrounding said solderable metal layer and contacting at least a portion of said metalized pad.

16. (Twice Amended) A solder bonded assembly comprising:

a first substrate comprising a first solder pad;

a second substrate comprising a second solder pad;

a bump feature comprising a substantially non-deformable dielectric core, a solderable metal layer completely surrounding said core and a solder layer completely surrounding said solderable metal layer, said bump feature being disposed between said first and second solder pads; and

said solder layer covering at least a portion of each of (a) said first solder pad, (b) and said second solder pad.

24. (Amended) A solder-coated article comprising:

a dielectric core having a largest dimension ranging from 1 to 1000 microns;

a solderable metal layer completely surrounding said core; and

a solder layer completely surrounding said metal layer;

wherein said dielectric core has a melting temperature higher than said solder layer.

25. (Amended) A modified substrate comprising:

a substrate;

a metalized pad on said substrate; and

a bump feature on said metalized pad, said bump feature comprising a dielectric core; a solderable metal layer completely surrounding said core; and a solder region completely surrounding said solderable metal layer and contacting at least a portion of said metalized pad;

wherein said dielectric core has a melting temperature higher than said solderable metal layer.

26. (Amended) A solder bonded assembly comprising:

a first substrate comprising a first solder pad;

a second substrate comprising a second solder pad;

a bump feature comprising a dielectric core a solderable metal layer completely surrounding said core and a solder layer completely surrounding said solderable metal layer, said bump feature being disposed between said first and second solder pads; and

said solder layer covering at least a portion of each of (a) said first solder pad, (b) and said second solder pad;

wherein said dielectric core has a melting temperature higher than said solderable metal layer.